

### **Remarks**

Claims 6 and 8-12 are presently pending in the application, with claims 6 and 11 being currently amended.

In the Official Action, Examiner rejects previously pending claims 6 and 8-12 under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, Examiner states that Applicant appears to be claiming a polysilazane coating on a base which may contain calcium particles of some type. Yet, the claims are indefinite in that although a composition is set out, they are written in almost a product by process style. For example, the simulated body fluid is not part of the composition per se. And immersion in claims 11 and 12 do not change the composition. Also, the intended use of "apatite forming ability" allegedly does not lend the claim patentability. Finally, the coating fluid step seems to set out a method of forming the film on a base. As such, Applicant is requested to more particularly set out the claims so that it is clear whether a composition or product by process is being claimed. And, if a composition is claimed, the film composition should be set out for its polysilazane content and the inclusion of calcium particles, not just a calcium compound. *See* Official Action at Pages 2-3.

In response, independent claim 6, which is the only independent claim, has been further amended as follows to more clearly define Applicant's invention:

1. The phrase "apatite forming ability" has been moved to the preamble and inserted after "a biomaterial",
2. A solidifying step has been added to more clearly recite the process for producing the film,
3. A solvent is now included as one of the components of the coating liquid,

4. The polysilazane and the calcium compound, respectively, have been further described as follows: "which is dissolved in said solvent" and "which is dissolved in said solvent or disperses in the form of fine particles with a particle size of no more than 1 $\mu$ m in said solvent", and
5. The content ratio of the calcium compound to the polysilazane in the coating liquid is now recited.
6. The phrase "simulated body fluid" has been removed from the claim.

Support for the amendments to claim 6 can be found throughout the specification and at least at page 7, lines 23-24; page 5, lines 1-3 and 12; page 6, lines 14-16; and page 6, lines 18-20, for example.

Further concerning the §112 rejections, although it is relatively easy to define the composition of the coating liquid, difficulties exist with respect to defining the composition or structure of the film, which is produced by a process that includes an applying and solidifying step. For example, the coating liquid can contain a solvent, a polysilazane, and a calcium compound that can be either dissolved in the solvent or dispersed in the solvent in the form of fine particles with a particle size of no more than 1  $\mu$ m. That is, the coating liquid may be a solution or a dispersion, which includes the polysilazane and calcium compound as essential components. *See* page 5, lines 2-3 of the present specification. Further to that end, after the coating liquid is applied to the base material, the solvent is evaporated during the solidifying step, and, in the meantime, the polysilazane can carry out a chemical reaction to form a treated-polysilazane film. And, because it is hard to know the detail structure and composition of the treated-polysilazane film, Applicant resorts to and relies on so-called product-by-process limitations to satisfactorily define the film.

In addition, since the coating liquid in claim 6 also contains a calcium compound either dissolved in the solvent or dispersed in the form of fine particles with a particle size of no more than 1  $\mu\text{m}$  in the solvent, the treated-polysilazane film should uniformly contain a calcium compound. And such use of "calcium compound" refers to a calcium substance generally and is not limited only to calcium particles.

In view of all of the above, Applicant submits that claims 6 and 8-12 are no longer indefinite. Thus, the present §112 rejection is overcome and must be withdrawn.

Accordingly, the claims as pending are submitted to be patentable and the additional art, i.e., WO 2004/039904, cited by Examiner as being of interest is submitted not to change the situation. Regardless, Applicant notes that WO 2004/039904 was published after the filing date of the present application and, thus, is unavailable as prior art.

## **Conclusion**

As a result of the remarks given herein, Applicant submits that the rejections of the pending claims have been overcome. Therefore, Applicant respectfully submits that this case is in condition for allowance and request allowance of the pending claims.

If the Examiner believes any detailed language of the claims requires further discussion, he is respectfully asked to telephone the undersigned attorney so that the matter may be promptly resolved. Applicant also has submitted all fees believed to be necessary herewith. Should any additional fees or surcharges be deemed necessary, the Examiner has authorization to charge fees or credit any overpayment to Deposit Account No. 23-3000.

Respectfully submitted,  
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